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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)

)
Amendment of Part 25 of the Commission's)
Rules to Establish Rules and Policies)
Pertaining to the Second Processing Round)
of the Non-Voice, Non-Geostationary)
Mobile Satellite Service)

IB Docket No. 96-220

COMMENTS

Volunteers in Technical Assistance, Inc. ("VITA"), by its attorneys, hereby comments on the Notice of Proposed Rulemaking ("NPRM") issued in the above-referenced proceeding on October 29, 1996. VITA fully supports the Commission's effort to license without unnecessary delay the remaining spectrum available for the Non-Voice, Non-Geostationary Mobile Satellite Service ("NVNG MSS"). In addition, VITA recognizes the difficulties presented by the fact that the remaining NVNG MSS spectrum is insufficient to accommodate the stated needs of NVNG MSS applicants.

The solutions proposed in the NPRM, however — namely, excluding VITA from the second-round processing group, requiring VITA to share its frequencies with a second-round NVNG MSS operator, and using auctions to select licensees from among the remaining qualified applicants — fails to recognize VITA's unique humanitarian mission or take into account the already severe spectrum and operating constraints VITA faces, neglects to give VITA adequate credit for its pioneer's preference, and ignores the adverse effects of auctions on international satellite systems such as VITA's. As a result, VITA believes that these proposals should be modified as discussed below.

I. VITA SHOULD NOT BE EXCLUDED FROM THE SECOND-ROUND PROCESSING GROUP.

A. The Commission's Rationale For Excluding First-Round Licensees From The Second-Round Processing Group Does Not Apply To VITA.

In the NPRM, the Commission recognized that one of its primary objectives is "to create a regulatory environment facilitating the provision of efficient, innovative,

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and cost-effective satellite communications services in the United States.”¹ It went on, however, to posit that these ends will be served by an NVNG MSS policy that maximizes the number of licensees by excluding first-round licensees from the second-round processing group.²

As discussed in the NPRM, in commercial markets new entry and increased competition often will lead to lower prices, increased service offerings, and other benefits to the public. This basic proposition, however, cannot be oversimplified without sacrificing its validity. For example, government policies that promote new entry at the expense of restricting the ability of existing licensees to provide a viable service or to take advantage of economies of scale or scope may not increase competition or result in improved services to the public.³ Similarly — and of central importance in this proceeding, although unrecognized in the NPRM — government policies that promote entry opportunities for commercial systems by denying spectrum to non-commercial systems can narrow rather than expand the range of services offered to the public.

The NPRM’s fundamental premise — that “more” NVNG systems are necessarily “better” — oversimplifies the policy questions facing the Commission by incorrectly assuming that commercial operators will provide a full range of services. This assumption, however, ignores the fact that commercial systems will serve particular customers and provide a particular mix of services depending upon the profit characteristics of various markets. No matter how many commercial systems are licensed, and no matter how vigorous the competition among the licensed systems, commercial NVNG MSS operators will ignore markets in which the profit potential is insufficient to justify their attention. These users will be served *only* if the Commission’s licensing policies preserve the opportunity for non-commercial systems to obtain adequate, suitable spectrum.

¹ NPRM at ¶ 10 (citing 47 U.S.C. § 151).

² See, e.g., NPRM at ¶¶ 11-12.

³ See e.g., *Amendment of the Commission’s Rules to Establish New Personal Communications Services, Memorandum Opinion and Order*, Gen. Docket 90-314, 9 FCC Rcd 4957. (“Our desire to maximize competition must be tempered, however, because . . . spectrum is limited.”) *Id.* at ¶53; cf. NPRM at ¶¶ 20, 31 (economies of scale or scope could outweigh the benefits of maximizing the number of licensees).

From the outset, VITA alone has proposed to serve non-commercial NVNG MSS needs. Consistent with its long-standing mission, VITA plans to operate its system on a humanitarian aid-related basis to provide a communications system serving educational, health, environmental, disaster relief, and other needs in developing countries.⁴ Particularly in light of the Commission's commitment to universal service, to the development of an equitable, comprehensive global information infrastructure, and to the needs of educators, health care providers, and other public interest users, the Commission should not now ignore this crucial difference between VITA and the other NVNG MSS service providers and applicants.

The NPRM, however, did just this. It disregarded the risks associated with relying solely on commercial markets to meet the full range of public needs for NVNG MSS services. As a result, it engaged in an analysis that took into consideration only the needs of profit-seeking NVNG MSS operators and treated all potential NVNG systems as perfect substitutes for one another.⁵ While it arguably is true, as the Commission posits in the NPRM, that maximizing the number of profit-seeking licensees will maximize the range of *commercial* services provided to the public, it is not true that maximizing the number of such licensees will maximize the full range of *services* provided to the public.

If VITA is not permitted to expand its system as proposed in its second-round application, the people that VITA seeks to serve will be left behind. Instead, the Commission should create a regulatory environment that facilitates the provision of efficient, innovative, and cost-effective non-profit communications services, as well as profit-seeking services.

⁴ See, e.g., *Allocation of Spectrum to the Fixed-Satellite Service and the Mobile-Satellite Service for Low-Earth Orbit Satellites*, Report and Order, ET Docket No. 91-280, 8 FCC Rcd 1812, n.4 (1993). When at an earlier stage of this proceeding the Commission considered adopting a separate non-commercial NVNG MSS service, ORBCOMM supported the proposal on the ground that VITA's different operating requirements — in particular, the transmission of larger data streams among only a relatively few users — could not be readily accommodated by Orbcomm's system, which had been designed to meet the needs of commercial users. *Id.* at ¶ 25.

⁵ See, e.g., NPRM at ¶ 25 (in summarizing demand for CRL-TWDM services, NPRM lists only commercial applications); ¶ 27 (in summarizing substitutes for NVNG MSS services, NPRM considers only commercial alternatives); ¶ 33 (in describing suppliers' conduct, NPRM considers only the behavior of profit-maximizing firms competing for the same customers).

B. Excluding VITA From The Second-Round Processing Group Would Be Inconsistent With The Commission's Policies On Spectrum Use.

In the NPRM, the Commission proposed a licensing policy that is inconsistent in several respects with the policies adopted in other proceedings.

First, because the NPRM focuses on licenses rather than spectrum, its proposal treats VITA unfairly by ignoring the very substantial difference in the amount of spectrum that will be used by VITA *vis-a-vis* other NVNG MSS systems. VITA has been licensed to operate only a single satellite using only 90 kHz to uplink and 90 kHz to downlink, and must operate under rigid constraints within these bands in order to satisfy sharing conditions imposed by NTIA.⁶ VITA also must share its 90 kHz uplink band with Orbcomm, which scans through VITA's frequencies, and VITA has already expressed its concern to the Commission that this sharing may interfere with VITA's uplink operations. The need to coordinate with a French satellite system, moreover, may limit VITA to one-half of its already-constrained downlink capacity.

In sharp contrast, ORBCOMM has been licensed to operate 36 satellites using 1275 kHz of spectrum (more than seven times the amount of spectrum available to VITA); STARSYS has been licensed to operate 24 satellites using 1810 kHz of spectrum (more than ten times the amount of spectrum available to VITA); and, under the licensing scheme proposed in the NPRM, NVNG MSS System-2 would be licensed to use 1,905 kHz of spectrum (more than ten times the amount of spectrum available to VITA) and NVNG MSS System-3 would be licensed to use 810 kHz of spectrum (four and one-half times the amount of spectrum available to VITA).

Indeed, the limited size of VITA's system is what made it possible for the NPRM to propose to license a second system (System-1) in the band licensed to VITA, yet this limited size was not taken into consideration when the NPRM concluded that all first-round licensees, regardless of size, should be excluded from the second-round processing group.

In other licensing proceedings, the Commission has avoided this type of inequity by placing caps on the amount of spectrum that can be licensed to a single

⁶ VITA also has a pending first-round application to operate a second satellite sharing these 90 kHz channels.

entity, rather than by restricting the number of licenses that a licensee may control. For example, in regulating CMRS ownership the Commission has placed a cap on the amount of PCS, cellular, and SMR spectrum that a licensee may control in a single geographic area.⁷ In this proceeding, the Commission should employ a similar approach: rather than excluding a first-round licensee solely because it is a first-round licensee, the Commission should consider the scale of the licensee's system and the amount of spectrum the licensee has available for use.

The NPRM's proposal to exclude all first-round licensees from the second-round processing group also is inconsistent with the Commission's policies to consider and provide adequately for the needs of non-commercial users, including educational, public safety, health, and other types of users.⁸ As discussed above, VITA's focus on providing humanitarian services to users who generally are unserved by commercial systems makes it unique among the first-round licensees.

C. Excluding VITA From The Second-Round Processing Group Would Deny VITA The Benefits Of Its Pioneer's Preference Grant.

As the Commission previously has recognized, VITA has been a pioneer in developing low-Earth orbiting ("LEO") concepts and technology. VITA was the first to experiment with LEO satellites for a civilian communications system; was the first to develop and demonstrate the utility of a small LEO system using VHF frequencies for civilian communications purposes; was the first to demonstrate an operational system and associated LEO satellite technology; was the first to develop a system that would support direct terminal-to-terminal network operations between ground stations without use of an expensive hub or gateway; and, through its experimental efforts, was instrumental in the development of innovative equipment such as

⁷ *Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap; Amendment of the Commission's Cellular/PCS Cross-Ownership Rule, Report and Order*, FCC 96-278, 1996 FCC LEXIS 4743, ¶ 94 (1996).

⁸ See, e.g., Remarks of Reed E. Hundt before the Association of Public Safety Communications Officers Annual Conference, August 17, 1995. ("Throughout my tenure as Chairman I have advocated that this so-called revolution falls far short if it is confined to the high and mighty, to those with massive resources. It is the opposite of what we think of as a revolution if the people with the most money to spend determine what communications technologies are developed and where they are delivered").

inexpensive earth stations and field units that automatically track and communicate with spacecraft.⁹

As the Commission previously concluded, "VITA's efforts have advanced the authorization of [the NVNG MSS service] that will provide reliable, low-cost data communications between ground stations located around the world."¹⁰ For these reasons, the Commission in 1993 awarded VITA a pioneer's preference for a license to operate an NVNG MSS system.

The purpose of the Commission's pioneer's preference rules is to foster the development of new services and technologies by reducing for innovators the delays and risks associated with the Commission's licensing procedures.¹¹ Most importantly, pioneers traditionally have not been subject to mutual exclusivity — *i.e.*, they have received a dispositive licensing preference and have been guaranteed a license irrespective of the number of competing applicants.¹²

In VITA's case, however, VITA never has benefited from its grant of a pioneer's preference. VITA participated in good faith with the other first-round applicants to develop a sharing solution that could accommodate all three applicants. As a result, mutual exclusivity was avoided and VITA's pioneer's preference grant was not relied upon in granting VITA's first-round application.

The sharing plan, as noted above, however, imposed rigid spectrum and operating constraints on VITA. In light of the limitations arising from the sharing agreement and the NTIA coordination, VITA concluded that it should apply for authority to launch and operate its proposed ground spare and, with respect to this satellite, to seek frequencies beyond those originally applied for. This third satellite is the satellite at issue for VITA in the second-round processing group.

⁹ *Allocation of Spectrum to the Fixed-Satellite Service and the Mobile-Satellite Service for Low-Earth Orbit Satellites*, Report and Order, ET Docket No. 91-280, 8 FCC Rcd 1812 (1993) at ¶¶ 4, 8, 35.

¹⁰ *Id.* at ¶ 35.

¹¹ *Id.* at ¶ 33; *Review of the Pioneer's Preference Rules*, Memorandum Opinion and Order, ET Docket No. 93-266, 11 FCC Rcd 2468, ¶ 2 (1996)

¹² *Review of the Pioneer's Preference Rules*, Memorandum Opinion and Order, 11 FCC Rcd 2468 at ¶ 2.

If the Commission excludes VITA from the second-round processing group, it will deny VITA the ability to overcome the capacity and operational limitations imposed by the sharing agreement and the NTIA coordination. Moreover, under the licensing scheme proposed in the NPRM, VITA will be forced to share even its limited spectrum with another NVNG MSS system. VITA, in effect, not only will not benefit from its pioneering work in the NVNG MSS field, but — because it will be limited to using spectrum as agreed in the sharing arrangement and will be unable to compensate for the sharing agreement's limitations — VITA actually will be penalized for its decision not to rest on its pioneer's preference but, instead, to seek to accommodate all first-round systems.

II. VITA SHOULD NOT BE REQUIRED TO SHARE ITS FREQUENCIES WITH ANOTHER SYSTEM.

The NPRM's sharing analysis overstates the potential for sharing with VITA and understates the adverse impact that sharing would have on VITA. As an initial matter, VITA notes that it views with trepidation any proposal to share its already limited and rigidly constrained spectrum on the basis of a sharing technology that is novel and untested. The NPRM describes time-sharing as a "new and revolutionary process," and acknowledges that the process "has not yet been attempted."¹³ Betting VITA's future on a new and revolutionary process concerns VITA and should give the Commission pause.

In addition, the Commission relies on information that is incorrect and incomplete. In proposing to accommodate a second system within the band licensed to VITA, the Commission assumes that VITA will have a single satellite. Based on this assumption, the Commission calculates how often VITA's system will be visible to a second system that hypothetically would time-share with VITA's system.¹⁴

The Commission overlooks the fact that VITA currently has a pending first-round application for a second satellite.¹⁵ Until the Commission acts on that

¹³ NPRM at ¶ 46 n.37.

¹⁴ NPRM at ¶¶ 46-47.

¹⁵ When it granted VITA authority to launch and operate its first satellite, the Commission gave VITA ninety days within which to make a financial showing for its second satellite. Prior to the expiration of this ninety-day window, and as a result of the destruction of VITA's first satellite during launch, VITA requested additional time to make its showing for its second satellite. That request was unopposed and remains pending. As a result, VITA's

application, any sharing analysis must take into account the possibility that VITA will be authorized to operate a two-satellite system in the near term. The Commission also does not recognize that requiring VITA to time-share will preclude VITA from expanding its hoped-for two satellite system to satisfy what VITA anticipates will be growing needs, once users in developing countries and relief and development agencies see, and come to depend upon, the benefits provided by VITA's initial system. While VITA projects that it can satisfy existing demand for its non-commercial services with the satellites for which it has applied, it is entirely possible that the market for "thin route" messaging in the developing world will expand rapidly. In this case, the sharing decisions that the Commission makes now will have severe consequences in the future.

Given all of these circumstances, and taking into account the fact that VITA must share its already limited spectrum with another first round Little LEO system, government stations, and foreign Little LEO satellites, the Commission should not require VITA to share with a new satellite system. The Commission should accept applications only for the other two systems that are proposed in the NPRM for the second round, with the possibility of an additional one or more future systems employing the frequencies that were made available at WRC '95 and the additional spectrum that may become available at WRC '97. Licensing even two additional systems would bring the total number of Little LEO competitors in the United States to five, a number that compares favorably with the number of competitors in other U.S. satellite services (*e.g.*, domestic satellites, separate systems, DBS systems, and Big LEO systems).

If the Commission requires VITA to time-share notwithstanding VITA's concerns, VITA asks that the Commission state unequivocally that the new system must protect VITA's first round operations. Although the NPRM discusses in detail the need for second round systems time-sharing with NOAA or DOD to protect uses by the incumbent, the corresponding discussion with respect to VITA proposes to

application for a second satellite also remains pending as part of the first processing round. The NPRM, however, does not reference this pending application. See NPRM at ¶¶ 46-47 (stating that VITA is authorized to operate only a single-satellite system and calculating the times during which ground users will be able to "see" VITA's system based on a single-satellite configuration).

leave it to "VITA and the Little LEO System-1 ... to make the arrangements necessary to ensure interference free operations."¹⁶ VITA needs more protection than that if it is to be subjected to the risk of interference from a "new and revolutionary process."

III. ANY DECISION TO EMPLOY AUCTIONS WOULD BE PREMATURE AND CONTRARY TO THE PUBLIC INTEREST.

In the NPRM, the Commission proposes to use auctions to license the remaining NVNG MSS spectrum in the event that mutual exclusivity exists. This proposal is premature and contrary to the public interest.

First, it is not yet clear whether mutual exclusivity will exist. The Commission has stated that it will permit applicants to submit amended applications for any or all of the three proposed "second-round" systems¹⁷; at this time, it is uncertain how many applicants will apply for each of these systems. In addition, the Commission has proposed modified financial qualifications for the NVNG MSS service.¹⁸; it also is unknown at present how many of the second-round applicants who submit modified applications will meet this stricter financial qualification standard. Until these questions are resolved, the Commission cannot determine whether mutual exclusivity exists or whether any mutual exclusivity that does exist can be resolved through engineering or other solutions.¹⁹ As a result, the Commission also cannot evaluate properly whether second round auctions are legally permissible and whether they are appropriate as a policy matter.

Second, even if mutual exclusivity does exist for one or more of the "second-round" systems, there are compelling policy reasons arguing against the use of auctions to assign licenses for international satellite systems, such as VITA's system. As has been widely recognized, if the United States uses auctions to license global satellite systems, it will encourage other countries to do the same, which would place the full employment of VITA's satellite beyond its financial reach.

¹⁶ NPRM at ¶ 48.

¹⁷ NPRM at ¶¶ 103-106.

¹⁸ NPRM at ¶ 40.

¹⁹ VITA notes that in the case of the numerous applications that have been filed for U.S. domestic satellites, separate systems, Big LEO systems, and Little LEO systems, the Commission always has been able to avoid mutual exclusivity without resort to auctions.

CONCLUSION

For the reasons stated herein, the Commission should include VITA in the second round processing group, and should not require VITA to share its frequencies with an additional system.

Respectfully submitted,

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